“Food Systems from an International Trade Perspective”

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Plenary Panel – Food Systems Sustainability Post-COVID

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"Global Food System: Opportunities and Challenges"
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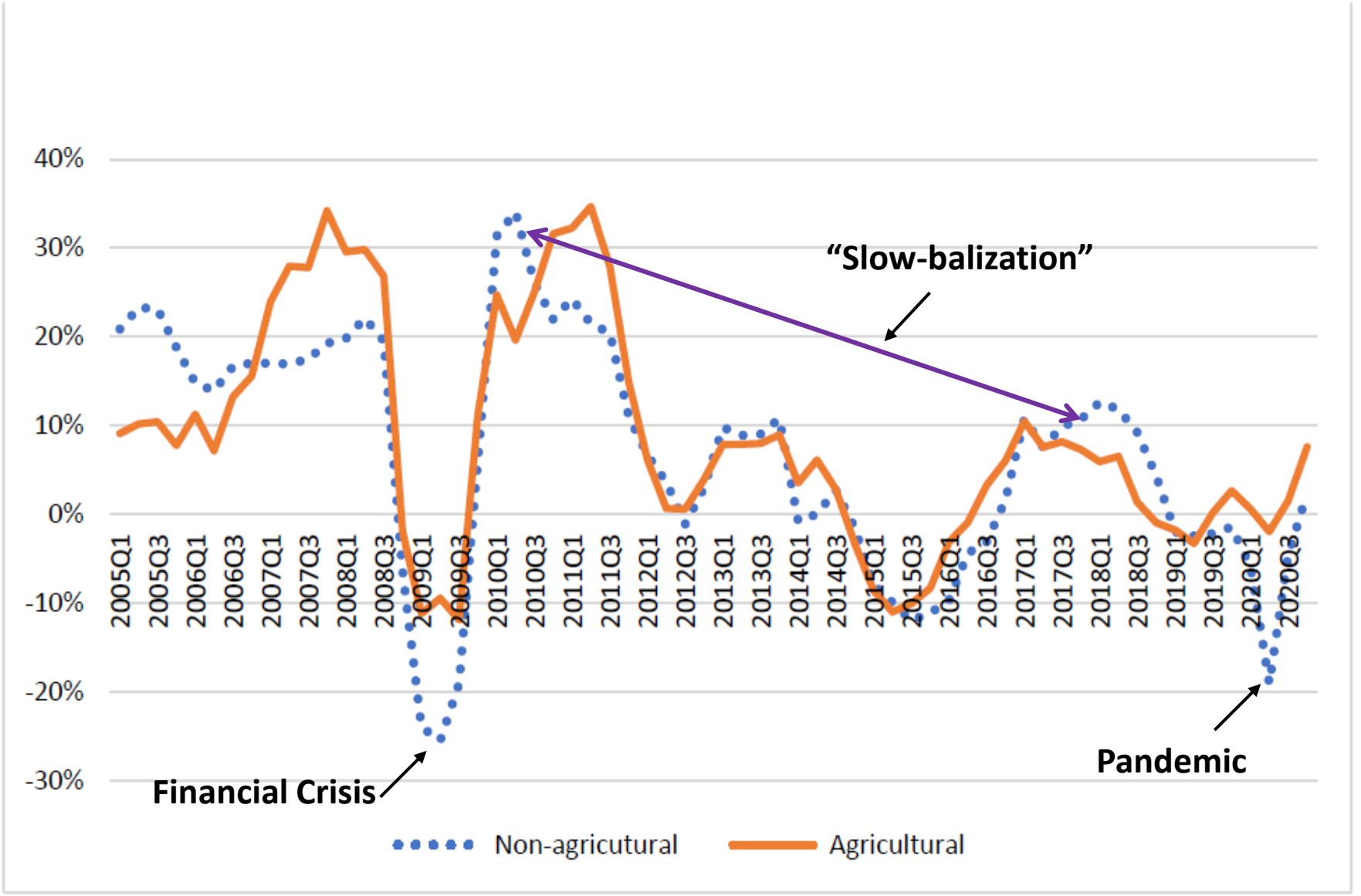
Global Agricultural Trade and Pandemic

- Global agricultural trade initially forecast to decline significantly -6.5 to -12.7% in 2020 (WTO, April 20)
- Agricultural trade has been quite "resilient" (Arita *et al*., IATRC, 2021; FAO, June 2021):
  - Low-income elasticities of demand
  - Bulk marine shipments of commodities (cereals and oilseeds) not subject to major disruptions
  - Agricultural global value chains (GVCs) less complex than in manufacturing (World Bank, 2020)
  - Relative exchange rate effects (FAO, June 2021)
- Sectoral disruption appears greater than regional disruption (Arita *et al*., *Choices*, 2021)

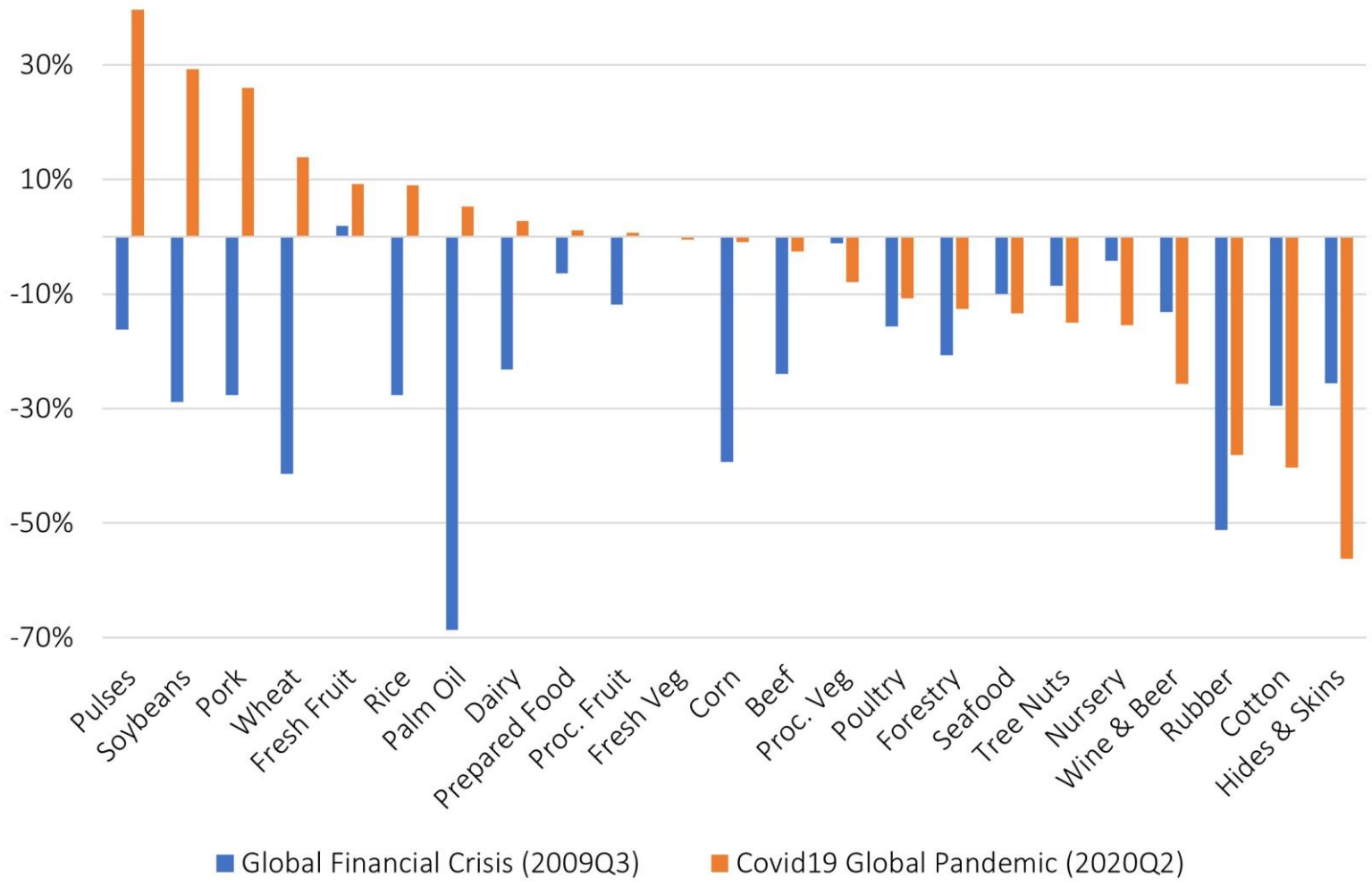
Global Trade and the Pandemic



Global quarterly growth in value of trade (change from quarter of previous year)

Source: Arita *et al*. (IATRC, 2021)

Agricultural Trade and the Pandemic: Sectoral Variation



Global quarterly growth in value of trade (change from quarter of previous year)

Source: Arita *et al*. (*Choices*, 2021)

Agricultural Trade and the Pandemic: Regional Variation

Exporter	Pulses	Soybean	Pork	Wheat	Fresh Fruit	Rice	Palm Oil	Dairy	Prep Food	Proc Fruit	Fresh Veg	Corn	Beef	Proc Veg	Poultry	Forestry	Seafood	Tree nuts	Nursery	Wine & Beef	Rubber	Cotton	Hides & Skins
Brazil	14%	48%	45%		-20%	171%	51%	16%	-1%	-9%	180%	-87%	30%	15%	-21%	-9%	-6%	-5%	12%	-28%	-35%	-12%	
Russia	-12%	46%	173%	30%	-35%	-73%	9%	10%	1%	50%	41%	54%	65%	13%	92%	-10%	-12%	72%	-50%	-16%			-97%
Kenya	374%				27%		95%	-57%	34%	74%	-6%		-14%	17%		-34%	-51%	-46%	-30%	-53%	10%		
Turkey	94%	624%			23%	44%		-14%	17%	5%	8%	69%	-18%	-1%	-15%	-12%	-13%	18%	-13%	-26%		-3%	
Argentina	109%	62%	258%	-35%	9%	6%		28%	1%	-64%	37%	16%	-4%	-44%	-23%	-4%	10%	-42%		-14%	-91%	-63%	8%
Mexico	16%		36%	226%	10%	63%	-11%	7%	15%	-6%	2%	66%	42%	10%	60%	-2%	-21%	-17%	-17%	-29%		-31%	
Japan			29%		7%	9%		26%	27%	-2%	171%		-20%	-5%	27%	-4%	-16%	-1%	13%	-38%			14%
Thailand	11%		112%		57%	0%	-75%	29%	6%	0%	-20%	15%		-4%	1%	-13%	6%	-48%	-53%	-55%	-41%		21%
Indonesia					88%		9%	34%	32%	16%	-26%			43%		-2%	5%	7%	0%	-25%	-41%		
Canada	60%	-6%	14%	11%	-37%	25%		17%	-4%	7%	22%	-49%	-5%	-15%	0%	-16%	-23%	-6%	-8%	-15%	-71%		-69%
China	11%	-25%	-13%		52%	-15%	31%	-40%	9%	-3%	5%	-97%	-34%	-7%	-17%	-5%	-15%	8%	-3%	-28%	-8%	-70%	-34%
Colombia					-16%		27%	50%	23%	-18%	-21%		49%	-25%		-46%	-4%		-16%		-58%		-66%
South Africa	48%		-41%	117%	16%	14%	-19%	-19%	-15%	5%	-26%	193%	61%	-24%	-32%	-49%	-26%	16%	-42%	-51%		-44%	-33%
Switzerland			40%			19%		-6%	-3%	-15%	0%		-12%	2%	-50%	0%	-76%	-37%	-7%	-44%			-37%
Ukraine	-15%	-69%	5%	21%	-66%			-25%	10%	-3%	-36%	-24%	-14%	-8%	-16%	-13%	11%	-37%	-5%	-7%			-14%
New Zealand	33%		-50%		2%			4%	-13%	20%	-13%		-5%	1%	-61%	-31%	-33%		-24%	-5%			-15%
EU	4%	-65%	34%	55%	-9%	0%	-16%	8%	3%	0%	7%	-20%	-3%	-13%	-9%	-5%	-12%	-27%	-19%	-27%	-27%	-62%	-72%
Chile	0%		42%		-11%			13%	1%	9%	-4%		38%	-3%	-5%	-15%	-7%	-22%	-9%	-17%			-38%
USA	27%	-27%	11%	-9%	-1%	3%	-12%	12%	-6%	-7%	-15%	11%	-26%	-16%	-7%	-18%	-10%	-17%	-17%	-21%	-29%	-35%	-35%
Uruguay		-5%		63%	36%	132%		-4%	54%				-23%			-2%	-25%			-37%			48%
Singapore			111%		-15%	50%	11%	20%	-3%	-24%	78%		-18%	15%	53%	-63%	-26%	31%	-44%	-49%	-46%		-85%
Malaysia			-18%		-16%	-12%	1%	-28%	-18%	54%	1%		-42%	-17%	-27%	-39%	-6%	-4%	-51%	-56%	-39%	-89%	-93%
Hong Kong			49%		35%	-6%		-50%	51%	-46%	-54%		-65%	-33%	-3%	-38%	-46%	-69%		-28%	-85%		0%
Cote d'Ivoire					-10%	148%	-21%		15%					-40%		-23%	-9%	-16%			-10%	-73%	
Morocco					1%			-34%	-21%	-10%	-23%			-33%		-37%	-18%	47%	-24%	-55%			
Australia	26%		37%	3%	-2%	-47%		-12%	1%	-20%	-12%	5%	-5%	21%	17%	-29%	-20%	-38%	-41%	-11%		-76%	-36%
Taiwan			96%		-7%	216%		66%	-8%	-29%	-13%		-37%	5%		-24%	-30%	-6%	-23%	-33%			
Peru	-31%				1%	8%	-39%	-73%	-14%	-2%	-13%	3%		-5%		-58%	-53%	-25%	6%	-60%			
Senegal					-11%	-89%			15%		43%					-10%	-20%	-78%				-10%	
Mozambique	-60%	82%			5%		-29%									-91%	-18%	-15%				-85%	
Zambia								-34%	-36%			-29%			-13%	11%			-20%			-75%	-95%

Change in Q2:2020 from previous quarter

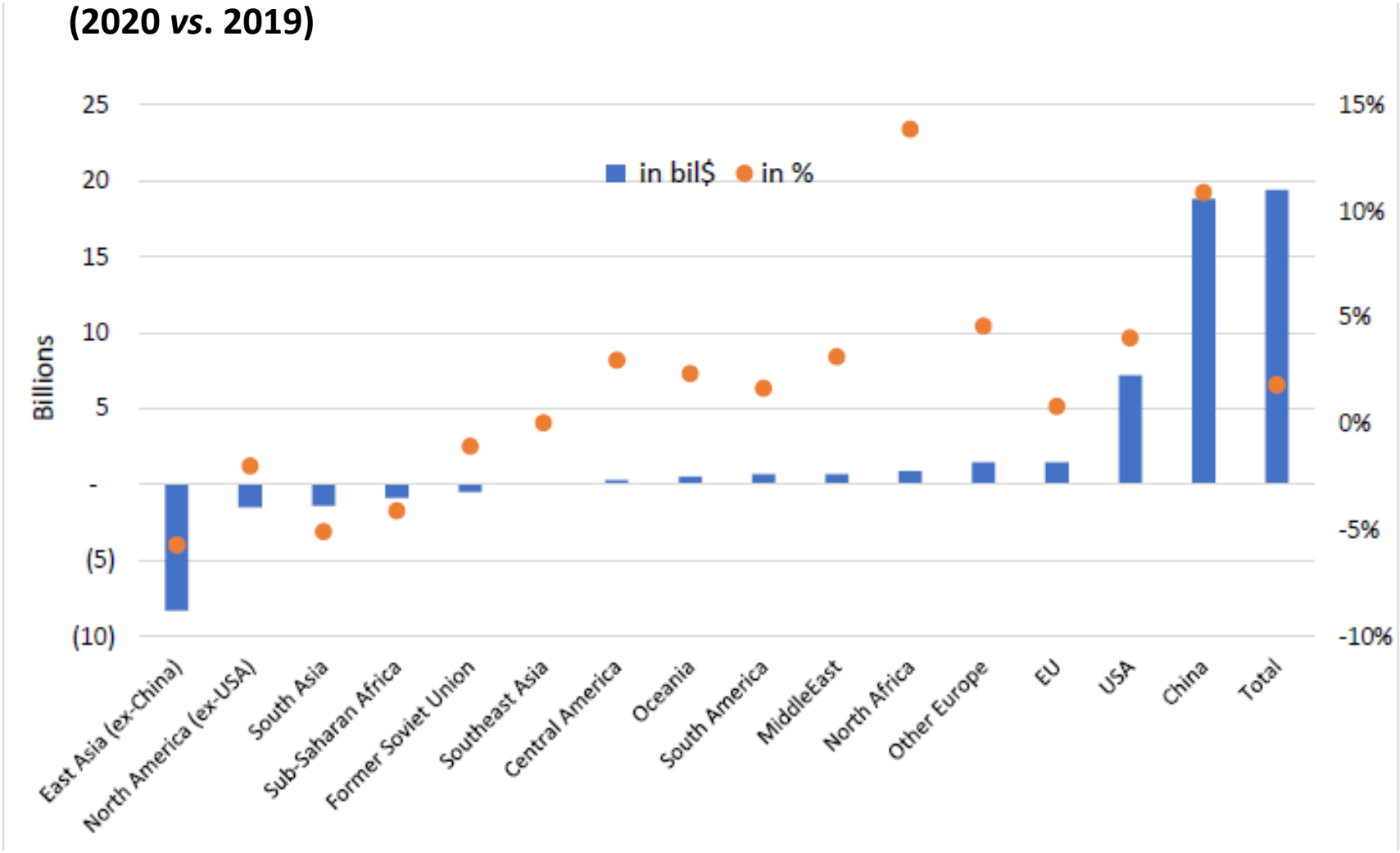
Source: Arita *et al*. (*Choices*, 2021)

Agricultural Trade: Other Factors

- Agricultural trade dominated by China rapidly rebuilding hog production capacity after African Swine Fever (ASF)
- Pork and oilseed imports dominated in 2020, with increases in corn and coarse grain imports going into 2021 – significant impact on global food prices (FAO, June 2021)
- US-China Phase One Trade Agreement (USCTA): 64% of 2020 commitment met and 87% of 2021 commitment met so far (Bown, May 25, 2021)
- Measured trade disruption due to China's 2018 retaliatory tariffs (Carter and Steinbach, NBER, 2020) likely reduced in 2020/21 as US has regained market share in oilseeds
- Without feed demand shock: to what extent would Chinese imports have been "managed" under USCTA and potentially trade distorting? (Feenstra and Hong, NBER, 2020)

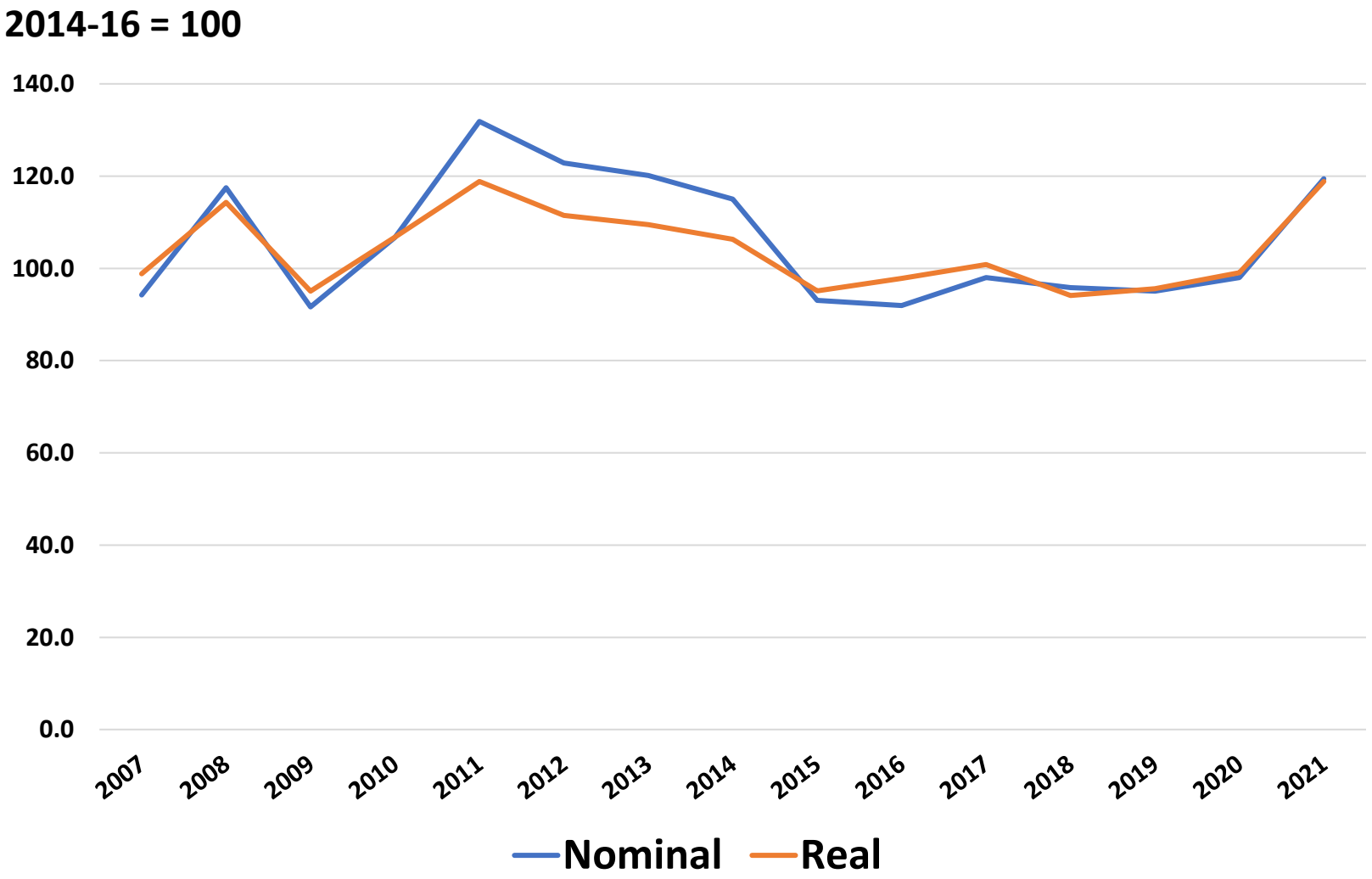
Agricultural Trade: Change in Value of Imports

(2020 *vs*. 2019)



Source: Arita *et al*. (IATRC, 2021)

Nominal and Real Food Prices



Source: FAO (June 2021)

Sustainability of Agricultural Trade

- ***Sustainability*** **of agricultural trade: ability to maintain and access global supplies with minimal price variance, subject to binding natural resource constraints***
- **Key factors affecting future sustainability:**
  - **Severity and impact of production shocks such as ASF**
  - **Trade policy choices, e.g., trade policies and domestic food price insulation (Laborde and Martin, 2012)**
  - **Future of multilateral trading system, e.g., WTO dispute settlement (Sheldon, 2021)**
  - **Role of trade in adaptation to climate change, e.g., Costinot *et al*. (2016) *vs*. Gouel and Laborde (NBER, 2017)**

*** Mix of weak and strong sustainability concept(s) (Irwin *et al*., 2016)**